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FEB 17 2009
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT : Sung Lee et al.
SERIAL NO. : 10/677,097 EXAMINER : Hanley, Susan Marie
FILED : October 1, 2003 ART UNIT : 1651
FOR: GLYCOSYLATED LPXTGases AND USES THEREOF

CERTIFICATE OF MAILING UNDER 37 CFR 1.8

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Pamela DeMarco
(Name of Person Depositing Mail)

Pamela DeMarco 2/13/09
(Signature and Date)

DECLARATION UNDER 37 C.F.R. §1.132

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SIR:

I, VINCENT A. FISCHETTI, hereby declare and state that:

1. I am Professor and Chairman, Laboratory of Bacterial Pathogenesis and Immunology, The Rockefeller University, having received my Ph.D. degree from New York University, New York in 1970. After that I was a postdoctoral fellow at The Rockefeller University and Albert Einstein College of Medicine. My curriculum vitae and bibliography of publications is attached hereto as EXHIBIT A.

2. My principal area of research is bacteriology and includes studying both the mechanisms by which gram-positive bacteria, particularly streptococci and staphylococci, cause disease and the development of methods to induce a protective mucosal immune response. Among other positions, I serve or have served on the advisory board for the

Defense Threat Reduction Agency, The Center for Structural Genomics of Infectious Diseases, and the Microbiology Advisory Board of the New York Academy of Sciences. I also serve or have served on the editorial boards of numerous scientific journals including Journal of Immunology, Infection and Immunity, Journal of Experimental Medicine, and Trends in Microbiology, and have been Editor-in-Chief of Infection and Immunity. I am a member of the American Society for Microbiology, the Kunkel Society, and the New York Academy of Sciences. I am a named inventor on over 45 issued U.S. Patents relating to the areas of bacteria, bacterial infections, bacterial proteins, and bacterial phage lytic enzymes.

3. In the course of my activities, I have been listed as inventor on numerous patent applications, including the one noted above entitled "GLYCOSYLATED LPXTGases AND USES THEREOF", having U.S. Serial Number 10/677,097, filed October 1, 2003, which claims priority to provisional application 60/415,273, filed October 1, 2002.

4. I have reviewed the present application and the outstanding rejections including with regard to written description, alleging that the application does not provide specific description for the claim-encompassed glycosylated endopeptidases that can be isolated from any possible species of *Staphylococcus* or *Streptococcus* that possess the properties that are recited in the claims. I note in fact that the application details the isolation, activity, and characteristics of claim encompassed glycosylated endopeptidases, including from *Staphylococcus aureus* and *Streptococcus pyogenes*, which are recognized representative and pathogenic strains of *Streptococcus* and *Staphylococcus*.

5. Based on my experience with and knowledge of gram-positive bacteria, I predict and expect that the glycosylated endopeptidase enzyme (termed LPXTGase) is present in all gram-positive bacteria. The cell wall peptidoglycan of all gram-positive bacteria is virtually identical. Except for the cross-bridge amino acids, the remaining portion of the peptidoglycan is invariant among all gram-positive species. Furthermore, based on genome sequence analysis, the surface proteins on these gram-positive bacteria

contain an LPXTG motif that is responsible for the attachment of these proteins to the cell wall with the help of enzymes such as sortase and LPXTGase. Since the cell wall peptidoglycan and surface protein chemistry is the same for all gram-positive bacteria, it follows that enzymes like sortase and LPXTGase, which function in the cell wall and surface protein chemistry, are present in all gram-positive bacteria.

6. I have confirmed through various studies that a comparable LPXTGase (glycosylated endopeptidase enzyme) is present and can be isolated from other gram-positive bacteria, particularly *Streptococcus pneumoniae*. LPXTGase was purified from *Streptococcus pneumoniae* using the same protocol as that used to isolate LPXTGase from *S. pyogenes* (Lee, S. G., Pancholi, V., & Fischetti, V. A. 2002 Characterization of a unique glycosylated anchor endopeptidase that cleaves the LPXTG sequence motif of cell surface proteins of Gram-positive bacteria. The Journal of Biological Chemistry 277[49], 46912-46922) and *S. aureus (* Lee, S.G. & Fischetti, V.A. 2006. Purification and characterization of LPXTGase from *Staphylococcus aureus*: the amino acid composition mirrors that found in the peptidoglycan. *Journal of Bacteriology*, 188, (2) 389-398*)*. Our published protocol was followed to isolate the LPXTGase from *S. pneumoniae* cells and we were successful in isolating the enzyme. This protocol corresponds to the protocol described in the present patent application, including in the examples. The pneumococcal LPXTGase behaved exactly as the streptococcal and staphylococcal enzyme in the chromatography steps verifying its similarity to the streptococcal and staphylococcal LPXTGase. It also cleaved the same LPXTG-containing substrate as the other enzymes. Based on this data, we are confident that the pneumococcal LPXTGase is very similar to the other LPXTGase enzymes previously described and corresponds to and represents an LPXTGase (glycosylated endopeptidase enzyme) claimed in the present patent application.

7. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Title 18 of the U.S. Code, Section 1001, and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

Dated: 2/12/09

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Personal: Married with 2 children

Education: Ph.D. New York University, Microbiology, 1970, (with honors)
M.S. Long Island University, Microbiology, 1967
B.S. Wagner College, Bacteriology, 1962

Training and Experience:

1990 -Pres.	Professor and Chairman, Laboratory of Bacterial Pathogenesis and Immunology, The Rockefeller University, New York, N.Y.
1978 - 1990	Associate Professor, The Rockefeller University, New York, N.Y.
1973 - 1978	Assistant Professor, The Rockefeller University, New York, N.Y.
1970 - 1979	Adjunct Assistant Professor, Adelphi University, Garden City, N.Y.
1972 - 1973	Guest Investigator, The Rockefeller University, New York, N.Y.
1972 - 1973	Postdoctoral Fellow, Albert Einstein College of Medicine, N.Y.
1970 - 1972	Postdoctoral Fellow, The Rockefeller University, New York, N.Y.

Honors and Awards (selected):

2008	Speaker: Royal Society London, mechanisms for tackling antibacterial resistance
2008	Keynote Speaker, Edinburgh International Phage Conference
2007	Keynote Speaker, Pennsylvania ASM
2007	Distinguished lecture, CDC, Atlanta
2007	OKU Distinguished Lecture, NYU College of Dentistry
2006	Fellow, New York Academy of Sciences
2006	Lloyd Harris Lecturer, U. of Oklahoma
2006	G.F. Heinrich keynote lecture, Lang Center, NY Hospital
2006	Division M Keynote Address, ASM
2006	Chair, NY Academy of Sciences, Microbiology Section
2005	COBRE Visiting Scholar, U. Hawaii
2004	Keynote address, Southern California ASM
2004	McLaghlan Lecturer, University of Texas, Galveston
2004	ASM Lecturer, American Society of Virology, Montreal
2003	Ellison Medical Foundation Lecture (Wind River Conference, CO)
2003	"State of the Art Lecture", Am. Society of Virology, Davis, CA
2003	Chair, Gordon Conference, Chemical and Biological Terrorism Defense
2003	Invited speaker, ASM Biodefense Conference, Baltimore, MD
2002	Invited speaker, Banbury meeting on Bacteriophage Biology, CSH, NY
2002	Invited speaker, Boston University, Boston, MA
2002	Cover article - Nature, Aug. 22. "Defense against Anthrax"

2002	Keynote address, International Organization for Mycoplasmology
2001	Guest speaker, Swiss Society of Intensive Medicine
2000	Keynote address, Joint German Conference for Microbiology
1999	Keynote address, Japanese Lancefield Society Annual Meeting
1999	John H. Hanks Memorial Lecture, Johns Hopkins School of Public Health
1999	Pfizer Lectureship (U. Pittsburgh)
1997 - 2007	**MERIT Award**, National Institutes of Health
1996 - 1997	Foundation Lecturer, American Academy for Microbiology
1996	Keynote address, International Lancefield Society, Paris
1995	Invited speaker, Institut Pasteur Symposia, "The Year of Louis Pasteur"
1994 - Pres	Fellow, American Academy for Microbiology
1994 - 1995	Chairman, Div. B (Microbial Pathogenesis), Am. Society for Microbiology
1992	McLaghlan Lecturer, University of Texas, Galveston
1992	Burroughs Wellcome Visiting Professor, (University of Arizona)
1987 - 1997	**MERIT Award**, National Institutes of Health
1987	Invited speaker, Institut Pasteur Centennial
1987	Shipley Lecturer, Harvard Medical School
1986 - 1987	President, Lancefield Society
1980	Alumni Achievement Award, Wagner College
1977 - 1982	Research Career Development Award, National Institutes of Health
1973 - 1977	Senior Investigator, New York Heart Association
1971 - 1973	Helen Hay Whitney Foundation Fellowship
1970	NYU Founders Day Award for outstanding scholarship

Professional Activities (selected):

2009-	Advisory Board: DTRA (Defense Threat Reduction Agency)
2008-	Advisory Board: The Center for Structural Genomics of Infectious Diseases
2004 - Pres	Scientific Advisory Board, Great Lakes Regional Center of Excellence
2002- Pres	Head, Scientific Advisory Board, Enzybiotics, LLC
1999 - Pres	Microbiology Advisory Board, New York Academy of Sciences
1994 - Pres	Board of Scientific Advisors and Trustee, Trudeau Institute
1992 - Pres	Advisory Editor, Trends in Microbiology
1990 - Pres	Advisory Editor, Journal of Experimental Medicine
1986 - 1996	Advisory Board, New York Hall of Science
2000 - 2003	Awards Advisory Board, American Society for Microbiology
1996 - 2002	Scientific Advisory Board, SIGA Technologies
1999 - 2002	Chairman, Institutional Review Board (IRB), Rockefeller University
1996 - 2000	Advisory Board, Defense Advanced Research Projects Agency (DARPA)
1996 - 2001	Chief Scientific Advisor, SIGA Pharmaceuticals
1989 - 1999	**Editor-in-Chief,** Infection and Immunity
1984 - 1998	Co-Director, Biotechnology Facility at the Rockefeller University
1995 - 1997	Member, Scientific Advisory Board, Spectral Diagnostics
1993 - 1995	Chairman, Scientific Advisory Board, M6 Pharmaceuticals
1988 - 1989	Assistant Editor, Journal of Experimental Medicine
1980 - 1985	Section Editor, Journal of Immunology
1978 - 1983	NIAID Bacteriology and Mycology Study Section (BM2)
1978 - 1989	Editorial Board, Infection and Immunity
1978 - 1980	Editorial Board, Journal of Immunology

Patents:	**US Patent No.**
1. Production of streptococcal M protein immunogens	# 4,784,948

2.	Streptococcal immunoglobulin A binding protein	# 5,352,588
3.	Immunoglobulin binding protein ML2.2	# 5,556,944
4.	Regulation of exoproteins in *Staphylococcus aureus*	# 5,587,288
5.	Method for exposing group A streptococcal antigens and an improved diagnostic test for the identification of group A streptococci	# 5,604,109
6.	Polypeptide of a hybrid surface protein by bacteria	# 5,616,686
7.	Process, apparatus and reagents for isolating cellular components (Commercialized as "Fast-prep" RNA/DNA isolation system by Q-biogene)	# 5,634,767
8.	Gene for serum opacity factor	# 5,707,822
9.	Delivery and expression of a hybrid surface protein by bacteria	# 5,786,205
10.	Use of Gram-positive bacteria to express recombinant proteins	# 5,821,088
11.	Production of streptococcal M protein	# 5,840,314
12.	Fibronectin/fibrinogen binding protein of group A streptococci	# 5,910,441
13.	Method for screening inhibitors of the enzyme which cleaves the anchor of surface proteins from Gram-positive bacteria	# 5,968,763
14.	Regulation of exoprotein in Staphylococcus aureus II	# 5,976,792
15.	Prophylactic and therapeutic treatment of group A streptococcal infections	# 5,985,271
16.	Recombinant poxvirus and streptococcal M protein vaccine	# 5,985,654
17.	Therapeutic treatment of group A streptococcal infections	# 5,997,862
18.	Therapeutic treatment of group A streptococcal infections	# 6,017,528
19.	Topical treatment of streptococcal infections	# 6,056,955
20.	Use of bacterial phage associated lysing enzymes for the prophylactic and therapeutic treatment of various illnesses	# 6,056,954
21.	Plasmin binding protein and therapeutic use thereof	# 6,190,659
22.	Use of bacterial phage associated lysing enzymes for treating various illnesses	# 6,238,661
23.	Bacterial phage associated lysing enzymes for treating dermatological infections	# 6,248,324
24.	Use of phage associated lytic enzymes for treating bacterial infections of the digestive tract	# 6,254,866
25.	Parenteral use of bacterial phage associated lysing enzymes for the therapeutic treatment of bacterial infections	# 6,264,945
26.	Composition incorporating bacterial phage associated lysing enzymes for treating dermatological infections	# 6,277,399
27.	Use of bacterial phage associated lysing enzymes for treating streptococcal infections of the upper respiratory tract	# 6,326,002
28.	Receptor for Mycobacterium leprae and methods of use thereof	# 6,331,405
29.	Use of bacterial phage associated lysing enzymes for treating bacterial infections of the mouth and teeth	# 6,335,012
30.	Receptor for *Mycobacterium leprae* and methods of use thereof	# 6,331,405
31.	Fibronectin/fibrinogen binding protein of group A streptococci	# 6,355,477
32.	Composition for treatment of a bacterial infection of the digestive tract	# 6,399,097
33.	Composition for treating dental caries caused by *S. mutans*	# 6,399,098
34.	Composition for treatment of ocular bacterial infection	# 6,406,692
35.	Composition for treatment of a bacterial infection of upper respiratory tract	# 6,423,299
36.	Vaginal suppository for treating group B streptococcal infections	# 6,428,784
37.	Use of bacterial phage associated lysing enzymes for treating dermatological infections	# 6,432,444
38.	Synthetic peptides from streptococcal M protein and vaccines prepared therefrom	# 6,602,907
39.	C1 bacteriophage lytic system	# 6,608,187

40. Chewing gum containing phage associated lytic enzymes for treating streptococcal A infections	# 6,685,937
41. Method for the treatment of bacterial eye infections	# 6,875,431
42. Tampon for the treatment of streptococcal group B infections	# 6,881,403
43. Therapeutic treatment of upper respiratory infections using a nasal spray	# 6,893,635
44. Method of treatment of vaginal infections	# 6,899,874
45. Nasal spray for treating streptococcal infections	# 7,014,850
46. Syrup composition containing phage associated lytic enzymes	# 7,063,837
47. Use of bacterial phage associated lysing enzymes for treating upper respiratory illness	#7,141,241
48. Phage-associated lytic enzymes for the treatment of Bacillus anthracis And related conditions	#7,402,309

Societies: American Society for Microbiology, Kunkel Society,
New York Academy of Sciences

BIBLIOGRAPHY
Vincent A. Fischetti, Ph.D.

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ORIGINAL ARTICLES and REVIEWS:

1. **Fischetti, V.A., B. Barron, and J.B. Zabriskie.** 1968. Studies on streptococcal bacteriophage. I. Burst size and intracellular growth of group A and group C streptococcal bacteriophages. **J. Exp. Med. 127**:475.

2. **Fischetti, V.A., and J.B. Zabriskie.** 1968. Studies on streptococcal bacteriophage. II. Adsorption studies on group A and group C streptococcal bacteriophages. **J. Exp. Med. 127**:489.

3. **Barron, B., V.A. Fischetti, and J.B. Zabriskie.** 1970. Studies of bacteriophage kinetics in multicellular systems: a statistical model for the estimation of burst size per cell in streptococci. **J. Applied Bact. 33**:436.

4. **Ellis, R.J., C.W. Lillehei, V.A. Fischetti, and J.B. Zabriskie.** 1970. Heart-reactive antibody: a measure of heart rejection in human heart transplants. **Circulation, XLI and XLII**, Supplement II. 81-97.

5. **Fischetti, V.A., E.C. Gotschlich, and A.W. Bernheimer.** 1971. Purification and physical properties of group C streptococcal phage-associated lysin. **J. Exp. Med. 133**:1105.

6. **Zabriskie, J.B., V. Utermohlen, S.E. Read, and V. Fischetti.** 1973. Streptococcus-related glomerulonephritis. **Kidney Int. 3**:100.

7. **Read, S.E., V.A. Fischetti, V. Utermohlen, R.E. Falk, and J.B. Zabriskie.** 1974. Cellular reactivity studies to streptococcal antigens. Migration inhibition studies in patients with streptococcal infections and rheumatic fever. **J. Clin. Invest. 54**:439.

8. **Fischetti, V.A., G. Siviglia, J.B. Zabriskie, and E.C. Gotschlich.** 1976. Radioiodination of non-ionic detergents of the alkyl-phenol class: Triton X-100. **Anal. Biochem. 73**:65.

9. **Fischetti, V.A., E.C. Gotschlich, G. Siviglia, and J.B. Zabriskie.** 1976. Streptococcal M-proteins extracted by non-ionic detergent. I. Properties of the antiphagocytic and type-specific molecules. **J. Exp. Med. 144**:32.

10. **Read, S.E., H. Reid, T. Poon-King, V.A. Fischetti, J.B. Zabriskie, and F.T. Rapaport.** 1977. HLA and predisposition to the non-suppurative sequelae of group A streptococcal infection. **Transplantation Proc. IX (1)**:543-546.

11. **Fischetti, V.A.** 1977. Streptococcal M protein extracted by non-ionic detergent. II. Analysis of the antibody response to the multiple antigenic determinants of the M protein molecule. **J. Exp. Med. 146**:1108.

12. **Fischetti, V.A., E.C. Gotschlich, G. Siviglia, and J.B. Zabriskie.** 1977. Streptococcal M protein: an antiphagocytic molecule assembled on the cell wall. **J. Infect. Dis. 136**:S222-S233.

13. **Fischetti, V.A.** 1978. Streptococcal M protein extracted by non-ionic detergent. III. Correlation between immunological cross-reactions and structural similarities with implications for antiphagocytosis. **J. Exp. Med. 47**:1771.

14. **Villarreal, H., Jr., V.A. Fischetti, I. van de Rijn, and J.B. Zabriskie.** 1979. The occurrence of a protein in the extracellular products of streptococci isolated from patients with acute glomerulonephritis. **J. Exp. Med. 149**:459.

15. **Hosein, B., M. McCarty, and V.A. Fischetti.** 1979. Amino acid sequence and physicochemical similarities between streptococcal M-protein and mammalian tropomyosin. **Proc. Natl. Acad. Sci. USA 76**:3765.

16. **Manjula, B.N., and V.A. Fischetti.** 1980. Studies on group A streptococcal M-proteins. Purification of type 5 M-protein and comparison of its amino terminal sequence with two immunologically unrelated M-protein molecules. **J. Immunol. 124**:261-267.

17. **Manjula, B.N., and V.A. Fischetti.** 1980. A tropomyosin-like seven residue periodicity in three immunologically distinct streptococcal M-proteins and its implications for the antiphagocytic property of the molecule. **J. Exp. Med. 151**:695-708.

18. **van de Rijn, I. and V.A. Fischetti.** 1981. Immunochemical analysis of intact M protein secreted from cell wall-less streptococci. **Infect. Immun. 32**:86-91.

19. **Phillips, G.N., P.F. Flicker, C. Cohen, B.N. Manjula, and V.A. Fischetti.** 1981. Streptococcal M protein; -helical coiled-coil structure and arrangement on the cell surface . **Proc. Nat. Acad. Sci. USA. 78**:4689-4693.

20. **Fischetti, V.A.**, 1983. Requirements for opsonic activity of human IgG directed to type 6 group A streptococci: Net basic charge and intact Fc region. **J. Immunol. 130**:896-902.

21. **Schutzer, S.E., V.A. Fischetti, and J.B. Zabriskie.** 1983. Toxic shock syndrome and lysogeny in *Staphylococcus aureus*. **Science. 120**:316-318.

22. **Ohkuni, H., J. Friedman, I. Van de Rijn, V.A. Fischetti, T. Poon-King and J.B. Zabriskie.** 1983. Immunological studies on post-streptococcal sequelae: I. Serological studies with an extracellular protein associated with nephritogenic streptococci. **Clin. Exp. Immun. 54**:185-193.

23. **Manjula, B.N., S.M. Mische and V.A. Fischetti.** 1983. Primary structure of streptococcal pep M5 protein: Absence of extensive sequence repeats. **Proc. Nat. Acad. Sci. USA. 80**:5475-5479.

24. **Acharya, A.S., A. Di Donato, B.N. Manjula, V.A. Fischetti, and J.M. Manning.** 1983. Influence of trifluroacetic acid on retention times of histidine-containing tryptic peptides in reverse phase HPLC. **Int. J. Peptide Protein Res. 22**:78-82.

25. **Scott, J.R., V.A. Fischetti.** 1983. Expression of streptococcal M protein in *E. coli*. **Science, 221**:758-760.

26. **Manjula, B.N., A.S Acharya, S.M. Mische, T. Fairwell and V.A. Fischetti.** 1984. Complete amino acid sequence of a biologically active 197 residue fragment of M protein isolated from type 5 streptococci. **J. Biol. Chem. 259**:3686-3693.

27. **Fischetti, V.A., K.F. Jones, B.N. Manjula, and J.R. Scott.** 1984. Streptococcal M protein expressed in *Escherichia coli*: Purification, characterization, and comparison with streptococcal derived M protein. **J. Exp. Med. 159**:1083-1095.

28. **Friedman, J., I. van de Rijn, H. Ohkuni, V.A. Fischetti, and J.B. Zabriskie.** 1984. Immunological studies of post-streptococcal sequelae: evidence for presence of streptococcal antigens in circulating immune complexes. **J. Clin Invest. 74**:1027-1034.

29. **Scott, J.R., W.M. Pulliam, S.K. Hollingshead and V.A. Fischetti**. 1985. Relationship of M protein genes in group A streptococci. **Proc. Nat. Acad. Sci. USA. 82**:1822-1826.

30. **Manjula, B.N., B. Trus, and V.A. Fischetti**. 1985. The presence of two distinct regions in the coiled-coil structure of streptococcal pep M5 protein: Relation to mammalian coiled-coil proteins and implications to its biological properties. **Proc. Nat. Acad. Sci. U.S.A. 82**:1064-1068.

31. **Jones, K.F., B.N. Manjula, K.H. Johnston, S.K. Hollingshead, J.R. Scott and V.A. Fischetti.** 1985. The location of variable and conserved epitopes among the variable serotypes of streptococcal M protein. **J. Exp. Med. 161**:623-628.

32. **Fischetti, V.A., K.F. Jones, and J.R. Scott.** 1985. Size variation of the M protein in group A streptococci. **J. Exp. Med. 161**:1384-1401.

33. **Manjula, B.N., M. Schmidt, and V.A. Fischetti.** 1985. Unimpaired function of human phagocytes in the presence of phagocytosis-resistant group A streptococci. **Infect. Immun. 50**:610-613.

34. **Chalovich, J.M. and V.A. Fischetti**. 1985. Crosslinking of actin filaments and inhibition of S-1 ATPase activity by streptococcal M6 protein. **Arch. Biochem. Biophys. 245**:37-43.

35. **Manjula, B.N., A.S. Acharya, T. Fairwell, and V.A. Fischetti.** 1985. Antigenic domains of the streptococcal Pep M5 protein: Localization of epitopes cross- reactive with type 6 M protein and identification of a hypervariable region of the M molecule. **J. Exp. Med. 163**:129-138.

36. **Hollingshead, S., V.A. Fischetti, and J.R. Scott.** 1985. The complete nucleotide sequence of the streptococcal M6 protein: Repetitive structure and membrane anchor. **J. Biol Chem. 261**:1677-1686.

37. **Scott, J.R., S.K. Hollingshead and V.A. Fischetti**. 1986. Homologous regions within M protein genes in group A streptococci. **Infect. Immun. 52**:609-612.

38. **Fischetti, V.A., M. Jarymowycz, K.F. Jones, S. Hollingshead, and J.R. Scott.** 1986. Streptococcal M protein size mutants occur at high frequency within a single strain. **J. Exp. Med. 164**:971-980.

39. **Jones, K.F., S.A. Kahn, B.W. Erickson, S.K. Hollingshead, J.R. Scott and V.A. Fischetti**. 1986. Immunochemical localization and amino acid sequence of cross reactive epitopes within the group A streptococcal M6 protein. **J. Exp. Med. 164**:1226-1238.

40. **Manjula, B.N. and V.A. Fischetti**. 1986. Sequence homology of group A streptococcal PepM5 protein with other coiled-coil proteins. **Biochem. Biophys. Res. Comm. 140**:684-690.

41. **Read, S.E., H.F.M. Reid, V.A. Fischetti, T. Poon-King, R. Ramkissoon, M. McDowell and J.B.**

Zabriskie. 1986. Serial studies on the cellular immune response to streptococcal antigens in acute and convalescent rheumatic fever patients in Trinidad. **J. Clin. Immunol. 6**:1-9.

42. **Scott, J.R., P.C. Guenthner, L.M. Malone, and V.A. Fischetti.** 1986 Conversion of an M- group A streptococcus to M+ by transfer of a plasmid containing an M6 gene. **J. Exp. Med. 164**:1641-1651.

43. **Jones, K.F. and V.A. Fischetti.** 1987. Biological and immunological identity of M protein on group G streptococci with M protein on group A streptococci. **Infect. Immun. 55**:502-506.

44. **Mische, S.M., B.N. Manjula, and V.A. Fischetti.** 1987. Relation of Streptococcal M protein with human and rabbit tropomyosin: The complete amino acid sequence of human cardiac alpha tropomyosin, a highly conserved contractile protein. **Biochem. Biophys. Res. Comm. 142**:813-818.

45. **Hollingshead, S.K., V.A. Fischetti, and J.R. Scott.** 1987. Size variation in group A streptococcal M protein is generated by homologous recombination between intragenic repeats. **Molec. Gen.Genet. 207**:196-203.

46. **Hollingshead, S.K., V.A. Fischetti, and J.R. Scott.** 1987. A highly conserved region present in transcripts encoding heterologous M proteins of group A streptococci. **Infect. Immun. 55**:3237-3239.

47. **Jones, K.F. and V.A. Fischetti**. 1988. Importance of the location of antibody binding on the M6 protein for opsonization and phagocytosis of group A M6 streptococci. **J. Exp. Med. 167**:1114-1123.

48. **Tylewska, S.K., V.A. Fischetti, and R.J. Gibbons**. 1988. The binding selectively of *Streptococcus pyogenes* and M protein to epithelial cells differs from that of lipoteichoic acid. **Current Microbiol. 16**:209-216.

49. **Horstmann, R.D., J. Sievertsen, J. Knoblock and V.A. Fischetti.** 1988. Antiphagocytic activity of streptococcal M protein: Selective binding of complement control protein Factor H. **Proc. Nat. Acad. Sci. USA. 85**:1657-1661.

50. **Fischetti, V.A., D.A.D. Parry, B.F. Trus, S.K. Hollingshead, J.R. Scott, and B.N. Manjula**. 1988. Conformational characteristics of the complete sequence of streptococcal M6 protein. **Proteins: Struct. Funct. Gen. 3**:60-69.

51. **Cheung, A. and V.A. Fischetti.** 1988. Selective expression of cell wall proteins on *Staphylococcus aureus* grown on solid and liquid media. **Infect. Immun. 56**:1061-1065.

52. **Bessen, D. and V. A. Fischetti**. 1988. Passive acquired immunity to group A streptococci by secretory immunoglobulin A. **J. Exp. Med. 167**:1945-1950.

53. **Pancholi, V. and V.A. Fischetti**. 1988. Isolation and characterization of the cell-associated region of group A streptococcal M6 protein. **J. Bacteriol. 170**:2618-2624.

54. **Hruby, D.E., Hodges, W.M., Wilson, E.M., Franke, C.A., and V.A. Fischetti**. 1988. Expression of streptococcal M protein in mammalian cells. **Proc. Nat. Acad. Sci. USA. 85**: 5714-5717.

55. **Bessen, D.B. and V.A. Fischetti**. 1988. Influence of Intranasal immunization with synthetic peptides corresponding to conserved epitopes of M protein on mucosal colonization by streptococci. **Infect. Immun. 56**:2666-2672.

56. **Jones, K.F., S.K. Hollingshead, J.R. Scott, and V.A. Fischetti.** 1988. Spontaneous M6 protein size mutants of group A streptococci display variation in antigenic and opsonogenic epitopes. **Proc. Nat. Acad. Sci. USA. 85**:8271-8275.

57. **Fischetti, V.A. and M. Windels**. 1988. Mapping the immunodeterminants of the complete streptococcal M6 protein molecule: Identification of an immunodominant region. **J.Immunol. 141**:3592-3599.

58. **Bessen, D. and Fischetti, V.A.** 1988. Evidence for two distinct classes of streptococcal M protein and their association with rheumatic fever. **J. Exp. Med. 169:**269-283.

59. **Fenderson, P.G., V.A. Fischetti, M. Cunningham.** 1989. Tropomyosin shares immunologic epitopes with group A streptococcal M proteins. **J. Immunol. 142:**2475-2481.

60. **Cheung, A. and Fischetti, V.A.** 1989. Role of surface proteins in staphylococcal adherence to fibers in vitro. **J. Clin. Invest. 83:** 2041-2049.

61. **Fischetti, V.A.** 1989. Streptococcal M protein: Molecular design and biological behavior. **Clin. Microbiol. Rev. 2**:285-314.

62. **Fischetti, V.A. W.M. Hodges, and D.E. Hruby.** 1989. Protection against pharyngeal colonization with a vaccinia virus:M protein recombinant. **Science. 244**:1487-1490.

63. **Pancholi, V. and V.A. Fischetti.** 1989. Identification of an endogenous membrane anchor-cleaving enzyme for group A streptococcal M protein: Its implications for the attachment of surface proteins in gram-positive bacteria. **J. Exp. Med. 170:** 2119-2133.

64. **Bessen, D. and V.A. Fischetti.** 1990. A human IgG receptor of group A streptococci is associated with tissue site of infection and streptococcal class. **J. Infect. Dis. 161**:747-754.

65. **Cheung, A.L. and V.A. Fischetti**. 1990. The role of fibrinogen in staphylococcal adherence to catheters in vitro. **J. Infect. Dis. 161**:1177-1186.

66. **Schneewind, O., K.F. Jones, and V.A. Fischetti**. 1990. Sequence and structural characterization of the trypsin-resistant T6 surface protein of group A streptococci. **J. Bacteriol. 172**:3310-3317.

67. **Bessen, D. and V.A. Fischetti**. 1990. Synthetic peptide vaccine against mucosal colonization by streptococci: Further definition of conserved protective epitopes and protection against heterologous M types. **J. Immunol. 145**:1251-1256.

68. **Fischetti, V.A., V. Pancholi, and O. Schneewind.** 1990. Conservation of a hexapeptide sequence in the anchor region of the surface proteins of gram-positive cocci. **Mol. Microbiol.4:**1603-1605.

69. **Bessen, D.E. and V.A. Fischetti**. 1990. Differentiation between two biologically distinct classes of group A streptococci by limited substitutions of amino acids within the shared region of M protein-like molecules. **J. Exp. Med. 172:**1757-1764.

70. **Cheung, A.L. and V.A. Fischetti**. 1991. The role of fibrinogen in mediating staphylococcal adherence to fibers. **J. Surg. Res. 50:**150-155.

71. **Cheung, A.L., M. Krishnan, E.A. Jaffe, and V.A. Fischetti**. 1991. Fibrinogen acts as a bridging molecule in the adherence of *Staphylococcus aureus* to cultured human endothelial cells. **J. Clin. Invest. 87**:2236-2245.

72. **Cheung, A.L., Ying, P. and V.A. Fischetti** 1991. A method to detect protease activity using unprocessed X-ray film. **Anal. Biochem. 193**: 20-23.

73. **Fischetti, V.A.** 1991. Streptococcal M protein. **Scientific American. 264**:58-65.

74. **Hruby, D.E., O. Schneewind, E.M. Wilson, and V.A. Fischetti**. 1991. Assembly and analysis of a functional vaccinia virus "amplicon" containing the C-repeat region from the M protein of *Streptococcus pyogenes*. **Proc.Nat.Acad.Sci. 88**:3190-3194.

75. **Jones, K.F., O. Schneewind, J.M. Koomey, and V.A. Fischetti**. 1991. Genetic diversity among the T protein genes of group A streptococci. **Molec. Microbiol. 5**:2947-2952.

76. **Cheung, A., J.M. Koomey, S. Lee, E.A. Jaffe, and V.A. Fischetti**. 1991. Recombinant human tumor necrosis factor alpha promotes adherence of *Staphylococcus aureus* to cultured endothelial cells. **Infect. Immun. 59**:3827-3831.

77. **Cunningham, M.W., S.M. Antone, J.M. Gulizia, B.M. McManus, V.A. Fischetti, and C.J. Gauntt**. 1992. Cytotoxic and viral neutralizing antibodies crossreact with streptococcal M protein, enteroviruses and human cardiac myosin. **Proc.Nat.Acad.Sci. 89:**1320-1324.

78. **Cheung, A. and V.A. Fischetti.** 1992. Regulation of exoprotein expression in *Staphylococcus aureus* by a locus (*sar*) distinct from *agr*. **Proc.Nat.Acad.Sci. 89:**6462-6466.

79. **Schneewind, O., P. Model and V.A. Fischetti**. 1992. Sorting of protein A to the staphylococcal cell wall. **Cell. 70:**1-20.

80. **Bessen, D. and V.A. Fischetti.** 1992. Nucleotide sequence of two adjacent M or M-like protein genes of group A streptococci: Different RNA transcript levels and identification of a unique IgA-binding protein. **Infect. Immun: 60**:124-135.

81. **Pozzi, G., M. Contorni, M.R. Oggioni, R. Manganelli, M. Tommasino, F. Cavalieri, and V.A. Fischetti**. 1992. The delivery and expression of a heterologous antigen on the surface of streptococci. **Infect. Immun. 60**:1902-1907.

82. **Pozzi, G., M.R. Oggioni, R. Manganelli and V.A. Fischetti.** 1992. Expression of M6 protein gene of *Streptococcus pyogenes* in *Streptococcus gordonii* after chromosomal integration and transcriptional fusion. **Res. Microbiol. 143**:449-457.

83. **Pancholi, V., and V.A. Fischetti**. 1992. A major surface molecule on group A streptococci is a glyceraldehyde-3-phosphate dehydrogenase with multiple binding activity. **J.Exp.Med.176:**415-426.

84. **Horstmann, R.D., H.J. Sievertsen, M. Leippe and V.A. Fischetti.** 1992. Role of fibrinogen in complement inhibition by streptococcal M protein. **Infect.Immun.60:**5036-5041.

85. **Fischetti, V.A., G.M Landau, P. Sellers, and J.P. Schmidt**. 1993. Identifying periodic occurrences

of a template with applications to protein structure. **Inf.Proc.Let. 45:** 11-18.

86. **Vashishtha, A. and V.A. Fischetti.** 1993. Surface-exposed conserved region of the streptococcal M protein induces antibodies cross-reactive with denatured forms of myosin. **J.Immunol:150:**4693-4701.

87. **Pancholi, V. and V.A. Fischetti**. 1993. The surface glyceraldehyde-3-phosphate dehydrogenase on group A streptococci is also an ADP-ribosylating enzyme. **Proc. Nat. Acad. Sci. USA. 90:**8154-8158.

88. **Fischetti, V.A., D. Medaglini, M. Oggioni, G. Pozzi.** 1993. Expression of foreign proteins on Gram-positive commensal bacteria for mucosal vaccine delivery. **Curr.Opinion in Biotech. 4**:603-610.

89. **Pozzi, G. , M.R. Oggioni, R. Manganelli, D. Medaglini, V.A. Fischetti, D. Fenoglio, M.T. Valle, A. Kunkl, F. Manca**. 1994. Human T helper cell recognition of an immunodominant epitope of HIV-1 gp120 expressed on the surface of *Streptococcus gordonii*. **Vaccine**. **12:**1071-1077.

90. **Ren, K., V. Pancholi, J. Bannen, A. Cheung, V.A. Fischetti, and J.B. Zabriskie**. 1994. Purification, characterization and biological properties of a new toxin from *Staphylococcus aureus* inducing TSS-like illness in rabbits. **J. Exp. Med. 180:**1675-1683.

91. **Cheung, A. and V.A. Fischetti**. 1994. Rapid assay for the isolation of RNA from gram-positive bacteria and mycobacteria. **Anal.Biochem. 222:**.511-514.

92. **Fischetti, V.A., R. Horstmann, and V. Pancholi**. 1995. Location of the complement factor H binding site in streptococcal M6 protein. **Infect.Immun. 63:** 149-153.

93. **Rakonjac, J.V., J.C. Robbins, and V.A. Fischetti**. 1995. DNA sequence of the serum opacity factor of class II group A streptococci: Identification of a fibronectin binding repeat domain. **Infect.Immun. 63**:622-631.

94. **Cheung, A., S. Projan, R.E. Edelstein and V.A. Fischetti.** 1995. Cloning, expression and sequence of a *Staphylococcus aureus* protein that binds fibrinogen. **Infect.Immun. 63:** 1914-1920.

95. **Medaglini, D., G. Pozzi, T.P. King, V.A. Fischetti.** 1995. Mucosal and systemic immune responses to a recombinant fusion protein expressed on the surface of the oral commensal bacterium *Streptococcus gordonii* after oral colonization. **Proc. Nat. Acad. Sci. 92:**6868-6872.

96. **Bessen, D.E., L.G. Veasy, H.R. Hill, N.H. Augustine, and V.A. Fischetti.** 1995. Serologic evidence for a class I group A streptococcal infection among rheumatic fever patients. **J. Infect. Dis. 172**:1608-1611.

97. **Khanna, A.K., Y. Nomura, V.A. Fischetti, and J.B. Zabriskie**. 1997. Antibodies in the sera of acute rheumatic fever patients binds to human cardiac tropomyosin. **J. of Autoimmunity 10**:99-106.

98. **Piard, J.-C., I. Hautefort, V.A. Fischetti, S.D. Erlich, M. Fons, and A. Gruss.** 1997.Cell wall anchoring of the *Streptococcus pyogenes* M6 protein in various lactic acid bacteria. **J. Bact. 179**:3068-3072.

99. **Pancholi, V. and V.A. Fischetti.** 1997. Regulation of phosphorylation of human pharyngeal cell proteins by group A streptococcal surface dehydrogenase (SDH): Signal transduction between streptococci and pharyngeal cells. **J. Exp. Med. 186**:1633-1643.

100. **Flueckiger, U., K.F. Jones and V.A. Fischetti.** 1998. Affinity purified immunoglobulins against the M protein of group A streptococci decrease adherence and internalization to human pharyngeal cells. **Infect. Immun.** 66:974-979.

101. **Blackmore, T.K., V.A. Fischetti, T.A. Sadlon, H.M. Ward, and D.L. Gordon.** 1998. M protein of group A streptococus binds to the seventh short consensus repeat of human complement factor H. **Infect. Immun. 66**:1427-1431.

102. **Pancholi, V. and V.A. Fischetti.** 1998. alpha-Enolase, a novel strong plasmin(ogen) binding protein on the surface of pathogenic streptococci. **J. Biol. Chem. 273:**14503-14515.

103. **Horn, D., R. Austrian, P.P. Cleary, J.J. Ferretti, V.A. Fischetti, E.C. Gotschlich, E.L. Kaplan, M. McCarty, S.M. Opal, R.B. Roberts, A. Tomasz, Y. Wachtfort, and J.B. Zabriskie.** 1998. Why have group A streptococci remained susceptible to penicillin? Streptococcal resistance/susceptibility. **Clin Infect Dis. 26**:1341-1345.

104. **Berneman, A., L. Belec, V.A. Fischetti, and J-P Bouvet.** 1998. Different specificities of secretory immunoglobulin G (sIgG) and serum IgG in humans. **Infect. Immun. 66**:4163-4168.

105. **Quinn, A., K. Ward, V.A. Fischetti. M. Hemric, and M. Cunningham.** 1998. Immunological relationship between the class I epitope of streptococcal M protein and myosin. **Infect. Immun. 66**:4418-4424.

106. **Rambukkana, A., H. Yamada, G. Zanazi, T. Mathus, J.L. Salzer, P.D. Yurchenco, K.P. Campbell, and V.A. Fischetti.** 1998. Role of -Distroglycan as a Schwann cell receptor for *M. leprae*. **Science, 282**:2076-2079.

107. **Shimoji, Y. and V.A. Fischetti.** 1999. Immunological Characterization of a protective antigen of Erysipleothrix rhusiopathiae: Identification of the region responsible for protective immunity. **Infect. Immun. 67**:1646-1651.

108. **Facklam, R., B. Beall, A. Efstratiou, V.A. Fischetti, E. Kaplan, P. Kriz, M. Lovgren, D. Martin, B. Schwartz, and A. Totolian.** 1999. Report on an international Workshop "Demonstration of *emm* typing and validation of provisional M-types for group A streptococci. Emerg. Infect. Diseases, **5**:247-253.

109. **Rocha, C. and V.A. Fischetti.** 1999. Isolation and characterization of a novel fibronectin binding protein on the surface of group A streptococci. **Infect. Immun. 67**:2720-2728.

110. **Bouvet, J-P. and V.A. Fischetti** 1999. Diverse sources antibody-mediated immunity at the mucosal barrier. **Infect. Immun. 67**:2687-2691

111. **Shimoji, Y, V. Ng, K. Matsumura, V.A. Fischetti, and A. Rambukkana.** 1999. A 21 kDa surface protein of *Mycobacterium leprae* binds peripheral nerve laminin-2 and mediates Schwann cell invasion. **Proc. Nat. Acad. Sci. 96**:9857-9862.

112. **Tak, C.I., V.A. Fischetti, and J.P. Schmidt.** 1999. An algorithm for identifying similar amino acid clusters among different alpha-helical coiled-coil proteins using their secondary structure.

Algorithmica, 25: 330-346

113. **Fontan, P, V. Pancholi, Nociari, M.M. and V.A.Fischetti.** 2000. Antibodies to streptococcal surface enolase react with human alpha-enolase: implications in poststreptococcal sequelae. **J Infect Dis.**182:1712-1721.

114. **Jones, K.F., S. Whitehead, M. Cunningham, and V.A. Fischetti.** 2001. Reactivity of rheumatic fever patient sera with group A streptococcal M protein, myosin and tropomyosin: a retrospective study. **Infect Immun. 68**:7132-7136.

115. **Broudy, T. V. Pancholi, and V.A. Fischetti.** 2001. Induction of streptococcal lysogenic bacteriophage after coculture with human pharyngeal cells **Infect Immun. 69**: 1440-1443.

116. **Nelson, D., L. Loomis, and V.A. Fischetti**. 2001. Prevention and elimination of upper respiratory colonization of mice by group A streptococci using a bacteriophage lytic enzyme. **Proc Nat Acad Sci USA. 98**:4107-4112.

117. **Brown, D.W., B.S. Baker, J.M. Ovigne, V.A. Fischetti, C. Hardman, A.V. Powles, L. Fry.** 2001.Non-M protein(s) on the cell wall and membrane of group A streptococci induce(s) IFN-gamma production by dermal CD4+ T cells in psoriasis. **Arch Dermatol Res 293**:165-70

118. **Fischetti, V.A.** 2001. Phage antibacterials make a comeback. **Nature Biotechnol. 19**:734-735.

119. **Baker B.S., D.W. Brown, V.A. Fischetti, J.M. Ovigne, W. Porter, A. Powles, L. Fry**. 2001. Skin T cell proliferative response to M protein and other cell wall and membrane proteins of group A streptococci in chronic plaque psoriasis. **Clin Exp Immunol 124**:516-21

120. **Quinn A., S. Kosanke S, V.A. Fischetti, S.M. Factor, M.W. Cunningham.** 2001.Induction of autoimmune valvular heart disease by recombinant streptococcal M protein. **Infect Immun 69**:4072-4078

121. **Ryan, P., V. Pancholi, and V.A. Fischetti**, 2001. Identification of a sialic acid binding motif in the M protein of group A streptococci. **Infect Immun. 69:**7401-7412.

122. **Loeffler, J., D. Nelson, and V.A. Fischetti**. 2001. Rapid killing in of *S. pneumoniae* with a bacteriophage cell wall hydrolase. **Science. 294**:2170-2172.

123. **Bolken, T.C., C.A. Franke, K.F. Jones, R.H. Bell, R.M. Swanson, D.S. King, V.A. Fischetti, D.E. Hruby.** 2002. Analysis of factors effecting surface expression and immunogenicity of recombinant proteins expressed by Gram-positive commensal vectors. **Infect Immun. 70**:2487-91.

124. **Giannakis E, Jokiranta TS, Ormsby RJ, Duthy TG, Male DA, Christiansen D, Fischetti VA, Bagley C, Loveland BE, Gordon DL.** 2002. Identification of the streptococcal M protein binding site on membrane cofactor protein (CD46). **J Immunol. 168**:4585-92.

125. **Broudy, T., V. Pancholi, and V.A. Fischetti**. 2002. In vitro interaction of *S. pyogenes* with human pharyngeal cells induces a phage-encoded extracellular deoxyribonuclease. **Infect Immun. 70**:2805-2811.

126. **Watanabe Y, Todome Y, Ohkuni H, Sakurada S, Ishikawa T, Yutsudo T, Fischetti VA, Zabriskie JB.** 2002. Cysteine protease activity and histamine release from the human mast cell line HMC-1 stimulated by recombinant streptococcal pyrogenic exotoxin B/streptococcal cysteine protease. **Infect Immun. 70**:3944-3947.

127. **Schuch, R., D. Nelson and V.A. Fischetti**. 2002. Identification of a bacteriolytic agent that can rapidly and specifically detect and kill *Bacillus anthracis.* **Nature**. **418:** 884–889.

128. **Lee, S., V. Pancholi, V.A. Fischetti.** 2002. Characterization of a unique glycosylated anchor endopeptidase that cleaves the LPXTG sequence motif of cell surface proteins of Gram-positive bacteria. **J. Biol. Chem**. **277**:46912-22.

129. **Loeffler, J. and V.A. Fischetti.** 2003. Synergistic lethal effects of phage lytic enzymes with different activities on penicillin sensitive *S. pneumoniae*. **Antimicrob Agents Chemother. 471**:375-7.

130. **Giannakis E, T.S. Jokiranta, D.A. Male, S. Ranganathan, R.J. Ormsby, V.A. Fischetti, C Mold, D.L. Gordon.** 2003. A common site within factor H SCR 7 responsible for binding heparin, C-reactive protein and streptococcal M protein. **Eur J Immunol 33**:962-969

131. **Nelson, D., R. Schuch, S. Zhu, D. Tscherne, and V.A. Fischetti**. 2003. The genomic sequence of C1, the first streptococcal phage . **J. Bacteriol. 185**:3325-3332.

132. **Broudy, T., and V.A. Fischetti**, 2003. In vivo lysogenic conversion of Tox$^-$ *S. pyogenes* to Tox$^+$ with lysogenic streptococci or free phage. **Infect Immun. 71**:3782-3786.

133. **Loeffler, J.M, S. Djurkovic and V.A. Fischetti**. 2003. The phage lytic enzyme Cpl-1 as a novel antimicrobial for pneumococcal bacteremia and sepsis. **Infect. Immun.71:**6199-204.

134. **Lee, S. and V.A. Fischetti.** 2003. D-alanine is present in the endopeptidase from *S. pyogenes*. **J. Biol. Chem.. 278**: 46649-53.

135. **Baker B.S., J-M Ovigne, V.A. Fischetti, J.M. Ovigne, A. Powles, L. Fry**. 2003. Reduced IFN-γ responses associated with HLA-DR15 presentation of streptococcal cell wall proteins to dermal Th-1 cells in psoriasis. **Scand J Immunol. 58:**335-41.

136. **Baker BS, J.M. Ovigne, V.A. Fischetti A. Powles, L. Fry.** 2003. Reduced IFN-gamma responses associated with HLA-DR15 presentation of streptococcal cell wall proteins to dermal Th-1 cells in psoriasis. **J Clin Immunol. 23**:407-414.

137. **Derbise A, Y.P. Song, S Parikh, V.A. Fischetti, and V. Pancholi.** 2004. Role of the C-terminal lysine residues of streptococcal surface enolase in Glu- and Lys-plasminogen-binding activities of group A streptococci. **Infect Immun 72**: 94-105.

138. **Collin M. and V.A. Fischetti**. 2004. A novel secreted endoglycosidase from *Enterococcus faecalis* with activity on human immunoglobulin G and ribonuclease B. **J. Biol. Chem. 279**:22558-70.

139. **Yoong, P., R. Schuch, D.C. Nelson and V.A. Fischetti**. 2004. Identification of a broadly active phage lytic enzyme with lethal activity against antibiotic resistant *Enterococcus faecalis* and *Enterococcus faecium*. **J Bacteriol**. **186**:4808-12.

140. **Fischetti V. A.** 2004. Vincent Fischetti--following phages for life. **Lancet Infect Dis**. **4**:246-9.

141. **Ohkuni H, Y. Todome, Y. Watanabe, T. Ishikaw, H. Takahashi, Y. Kannari, H. Kato, T. Uchiyama, H. Saito, V.A. Fischetti, J.B. Zabriskie.** 2004. Studies of recombinant streptococcal pyrogenic exotoxin B/cysteine protease (rSPE B/SCP) in the skin of guinea pigs & the release of histamine from cultured mast cells & basophilic leukocytes. Indian J Med Res.119 Suppl:33-6.

142. **Durkovik, S., J. Loeffler, and V.A. Fischetti.** 2005. Synergistic killing of *S. pneumoniae* with the bacteriophage lytic enzyme Cpl-1 and penicillin or gentamicin depends on the level or penicillin resistance. **Antimicrob Agents Chemother**. **49**:1225-1228.

143. **Cheng, Q., D. Nelson, S. Zhu, and V.A. Fischetti**. 2005. Removing group B streptococci colonizing the vagina and pharynx of mice with a bacteriophage lytic enzyme. **Antimicrob Agents Chemother. 49**:111-117.

144. **Kotloff, K.L., S.S. Wasserman, K.F. Jones, S. Livio, D.E. Hruby, C. Franke, and V.A. Fischetti.** 2005. Clinical and microbiologic response in volunteers to combined intranasal and oral inoculation of a *Streptococcus gordonii* carrier strain intended for future use as a group A streptococcal vaccine. **Infec. Immun. 73**:2360-2366.

145. **Gotschlich, E.C. and V.A. Fischetti**, 2005. The career of Maclyn McCarty. **J. Exp.Med. 201**:1699-1707.

146. **Fischetti, V.A.** 2005. Bacteriophage lytic enzymes: Novel anti-infectives. **Trends in Microbiol**. 13:491-6.

147. **Ellis, N M.J., Y. Li, W. Hildebrand, V. A. Fischetti, and M. W. Cunningham.** 2005. T cell mimicry and epitope specificity of cross-reactive T cell clones from rheumatic heart disease. **J. Immunol**. 175:5448-56.

148. **J. M. Entenza, J. M. Loeffler, D. Grandgirard, V. A. Fischetti, and P. Moreillon**. 2005. Therapeutic effects of bacteriophage Cpl-1 lysin against *Streptococcus pneumoniae* endocarditis in rats. **Antimicrob Agents and Chemother. 49**:4789-4792.

149. **Lee, S.G. and V.A. Fischetti**. 2006. Purification and characterization of LPXTGase from *S. aureus*: The amino acid composition mirrors that found in the peptidoglycan. J. Bacteriol, **188**:389-98.

150. **Yoong, P., R. Schuch, D. Nelson and V. A. Fischetti.** 2006. PlyPH, a muralytic enzyme with a broad pH range of activity and lytic action against *Bacillus anthracis.* **J. Bacteriol** . **188**:2711-4.

151. **Schuch, R., V.A. Fischetti.** 2006. Detailed genomic analysis of the gamma and W1 phage infecting *B. anthracis*: Implications for phage in environmental fitness and antibiotic resistance. **J. Bacteriol 188:** 3037-3051.

152. **Nelson, D., P. Chahalis S. Zhu, V.A. Fischetti.** 2006. PlyC: The first multimeric bacteriophage lysin. **Proc. Nat Acad Sci USA. 103**:10765-10770.

153. **Loeffler, J.M, and V.A. Fischetti.** 2006. Lysogeny of *Streptococcus pneumoniae* with MM1 Phage: Improved Adherence and Other Phenotypic Changes. **Infect. Immun. 74**:4486-4495.

154. **Fischetti, V.A.** 2006. Using phage lytic enzymes to control pathogenic bacteria. **BMC Oral Health 6**:Suppl 1:16.

155. **Fischetti, V.A., D. Nelson, and R. Schuch.** 2006. Reinventing phage therapy: are the parts greater than the sum? **Nature Biotech 24**:1508-1511.

156. **Porter C.J, R. Schuch, A.J. Pelzek, A.M. Buckle, S. McGowan, M.C.J. Wilce, J. Rossjohn; R. Russell, D. Nelson, V.A. Fischetti, J.C. Whisstock.** 2007. The 1.6 Å crystal structure of the catalytic domain of PlyB, a bacteriophage lysin active against *Bacillus anthracis*. **J. Molec. Biol.** 366:540-50.

157. **Euler, C.W. P.A. Ryan, J.M. Martin, and V.A. Fischetti.** 2006. M.SpyI, a DNA methyltransferase encoded on a *mefA* chimeric element modifies the genome of *Streptococcus pyogenes.* **J. Bacteriol.** 189:1044-54.

158. **Daniel, A., P.E. Bonnen, and V.A. Fischetti,** 2007. First complete genome sequence of *Staphylococcus epidermidis* bacteriophages. **J. Bacteriol.** 189:2086-100.

159. **Cheng, Q. and V. A. Fischetti.** 2007. Mutagenesis of a bacteriophage lytic enzyme PlyGBS significantly increases its lytic activity against geoup B streptococci. **Applied Microbiology Biotechnology.** 74:1284-91

160. **McCullers J.A., Å. Karlström, A.R. Iverson, J.M. Loeffler, and V.A. Fischetti.** 2007. A novel strategy to prevent otitis media caused by colonizing *Streptococcus pneumonia.* **PLoS Pathogens**. Mar. **23**:3.

161. **Fischetti,** VA. 2007. In Vivo Acquisition of Prophage in *Streptococcus pyogenes* and its Potential Role in Disease. **Trends in Microbiology** Vol 15/7 p 297-300.

162. **Ryan, P.A., B. Kirk, R. Schuch, V.A. Fischetti.** 2007. Capturing the Group A Streptococcal Transcriptome during Pharyngeal Cell Adherence. PLoS Comput Biol. July 6;3(7):e132

163. **J. Yu, P. Wiita, R. Kawaguchi, J. Honda, A. Jorgensen, K. Zhang, V. A. Fischetti, and H. Sun.** 2007. Biochemical Analysis of a Common Human Polymorphism Associated with Age-related Macular Degeneration. **Biochemistry**, **46**:8451-8461

164. **McBride, S.M., V. A. Fischetti, D. J. LeBlanc, R.R. Facklam, R.C. Moellering, Jr., and M.S. Gilmore.** 2007. Genetic Diversity among *Enterococcus faecalis.* PLoS-One Jul 4;2:e582.

165. **Köller, T, N. Masanobu, D. Nelson, V. A. Fischetti, M.O. Glocker, A. Podbielski, and B. Kreikemeyer**· 2008. PlyC, a novel bacteriophage lysin for compartment dependent proteomics of Group A Streptococci. **Proteomics 8**:140-148.

166. **Schmitz, J.E., A. Daniel, M. Collin, R. Schuch, and V.A. Fischetti**. 2007. Rapid DNA library construction for functional and metagenomic screening. Appl Environ Microbiol. **74**:1649-52. Epub 2007 Dec 14.

167. **Grandgirard, D., J.M. Loeffler, J. Kummer, V.A. Fischetti, and S.L. Leib,.** 2008. Phage lytic enzyme Cpl-1 for antibacterial therapy in experimental pneumococcal meningitis. Infect Dis. **197**:1519-22.

168. **Velloso, L.M., S.S. Bhaskaran, R. Schuch, V. A. Fischetti and C. E. Stebbins**. 2008. Structural Basis for the allosteric regulation of non-hydrolyzing UDP-GlcNAc 2-epimerases. EMBO Rep. **9**:199-205. Epub 2008 Jan 11.

169. **Martins, T.B., N.H. Augustine, A.R. Phansalkar, V.A. Fischetti, J.B. Zabriskie, P.P. Cleary, J.M. Musser, L.G. Veasy, and H.R. Hill.** 2008. Analysis of antibody responses to specific and non-specific streptococcal and tissue antigens in patients with acute rheumatic fever. Int Immunol. **20**:445-52. Epub 2008 Feb 1.

170. **Witzenrath, M. B. Schmeck, J. M. Doehn, T. Tschernig, J. M. Löffler, M. Zemlin, J. Zahlten, H. Schütte, V.A. Fischetti, N. Suttorp, and S. Rosseau** 2008. Systemic use of the endolysin Cpl-1 rescues mice with fatal pneumococcal pneumonia. Crit Care Med (in Press).

171. **Raz, A, and VA Fischetti**. 2008. Sortase A localizes to distinct foci on the *Streptococcus pyogenes* membrane. **Proc. Nat. Acad. Sci. USA.;105**:18549-54. Epub 2008 Nov 18.

172. **Fischetti VA**. Bacteriophage lysins as effective antibacterials. Curr Opin Microbiol. 2008 Oct 13. [Epub ahead of print]

173. **Ohkuni,H, H. Nagamune, N. Ozaki, A. Tabata, Y. Todome, Y. Watanabe, H. Takahashi, K. Ohkura, H. Kourai, H. Ohtsuka, V. A. Fischetti, and J. B. Zabriskie**. 2009. Cholesterol-dependent cytolysins act not only as hemolysis but also as platelet agglutinins. (Submitted.)

174. **Schuch, R. and VA Fischetti.** 2009. The secret life of *B. anthracis*. Submitted.

BOOK CHAPTERS:

1. **Zabriskie, J.B., S.E. Read, and V.A. Fischetti**. 1972. Lysogeny of streptococci. *In*: Streptococci and Streptococcal Diseases, L.W. Wannamaker and J.M. Matsen, Editors, Academic Press, New York, Chap. 7. pp 99-118.

2. **Read, S.E., J.B. Zabriskie, V. Fischetti, V. Utermohlen, and R.E. Falk.** 1974. Studies on cellular reactivity to streptococcal antigens in patients with streptococcal infections and their sequelae. *In*: Streptococcal Disease and the Community, M.J. Haverkorn, Ed., Excerpta Medica, Amsterdam, p 85.

3. **Fischetti, V.A., J.B. Zabriskie, and E.C. Gotschlich**. 1974. Physical, chemical and biological properties of streptococcal M-protein extracted with purified streptococcal phage-associated lysin. *In*:

Streptococcal Disease and the Community, M.J. Haverkorn, Editor, Excerpta Medica, Amsterdam. P.26.

4. **Bloom, B.R., G. Stoner, V.A. Fischetti, M. Nowakowski, R. Muschel, and A. Rubinstein.** 1974. Products of activated lymphocytes (PALs) and the virus plaque assay. *In*: Progress in Immunology, vol. 3, L. Brent and J. Holborow, Editors, North-Holland Publishing Company, pp133.

5. **Zabriskie, J.B., V.A. Fischetti, I. van de Rijn, H.M. Fillit, and H. Villarreal, Jr.** 1978. Biological implications of cross-reactions between group A streptococci and renal tissues. *In*: Biology and Chemistry of the Basement Membrane, N. Kefalides, Editor, Academic Press, New York, pp 453.

6. **Fischetti, V.A.** 1979. Streptococcal M protein: correlation between their immunological cross-reactions and structural similarities, with implications for their antiphagocytic action. *In*: Pathogenic Streptococci, M.T. Parker, Editor, Reedbooks Ltd., Surrey, England, pp 17-18.

7. **Hosein, B., and V.A. Fischetti.** 1979. Binding and stimulation of opsonic antibodies by group A streptococci lacking antiphagocytic activity. *In*: Pathogenic Streptococci, M.T. Parker, Editor, Reedbooks Ltd., Surrey, England. p 19.

8. **Fischetti, V.A.** 1980. Immunochemistry of the proteins on the group A streptococcal cell wall. *In*: Streptococcal Diseases and the Immune Response, S.E. Read and J.B. Zabriskie, Editors, Academic Press, New York, pp111-124.

9. **Villarreal, H., Jr., V.A. Fischetti, I. van de Rijn, and J.B. Zabriskie**. 1980. Observations on an extracellular protein unique to nephritogenic streptococci. *In*: Streptococcal Diseases and the Immune Response, S.E. Read and J.B. Zabriskie, Editors, Academic Press, New York, pp 185-198.

10. **Manjula, B.N., S.M. Mische and V.A. Fischetti**. 1982. NH_2- terminal sequence of the clostripain and NBS peptides of streptococcal M5 protein purified in one step by HPLC. *In*: Proceedings of the IVth International Conference on Methods in Protein Sequence Analysis. M. Elzinger, Ed. Humana Press, Inc. N.J. p 539.

11. **Fischetti, V.A., and B.N. Manjula.** 1982. Biologic and immunologic implications of the structural relationship between streptococcal M protein and mammalian tropomyosin. *In*: Bacterial vaccines, J.B. Robbins and J.C. Sadoff, editors, Thieme-Stratton Inc., New York. p 411.

12. **Fischetti V.A., B.N. Manjula, M. Fazio, P.F. Flicker, C. Cohen, G.N. Phillips Jr**. 1982. The alpha-helical coiled-coil structure of streptococcal M protein. *In*: Proceedings of the VIII International Symposium on Streptococci and Streptococcal Diseases, P. Christensen and S.E. Holm, editors. p 85.

13. **Manjula, B.N., and V.A. Fischetti.** 1982. Structural implications of the amino acid sequence of streptococcal M proteins. *In*: Proceedings of the VIII International Symposium on Streptococci and Streptococcal Diseases, P. Christensen and S.E. Holme, editors. Page 79.

14. **Fischetti, V.A. and M. Fazio-Zanakis.** 1985. Electron microscopy of the group A streptococcal cell surface. *In*: Recent Advances in Streptococci and Streptococcal Diseases, Y. Kimura, S. Kotani and Y. Shiokawa, Editors, Reedbooks Ltd., Surrey, England. p 180.

15. **Fischetti, V.A., K.F. Jones, B.N. Manjula, W.M. Pulliam, S.K. Hollingshead, and J.R. Scott.**

1985. Structural and genetic studies of streptococcal M6 protein expressed in *Escherichia coli*. *In*: Streptococci and Streptococcal Diseases, Y. Kimura, S. Kotani and Y. Shiokawa Editors, Reedbooks Ltd., Surrey, England. p229.

16. **Scott, J.R., S. Hollingshead, S., K.F. Jones and V.A. Fischetti.** 1986. Genetic studies of the M protein of group A streptococci. *In*: "Microbiology-1986", L. Lieve, editor. p 38.

17. **Scott, J.R., S.K. Hollingshead, K.F. Jones, and V.A. Fischetti.** 1987. Structural and genetic relationships of the family of M protein molecules of group A streptococci. *In*: Streptococcal Genetics. J.J. Ferretti and R. Curtiss III, Eds., ASM publications. pp 93-97.

18. **Fischetti, V.A., K.F. Jones, B.N. Manjula, S.K. Hollingshead and J.R. Scott**. 1987. Molecular approaches to understanding the function of the group A streptococcal M protein: A unique virulence molecule. *In*, Modern Biotechnology and Health: Perspectives for the year 2000. M. Patarroyo and J.B. Zabriskie ed. Academic Press Inc. Florida. Chap. 9. p77.

19. **Fischetti, V.A., K.F. Jones, S.K. Hollingshead, and J.R. Scott.** 1987. Molecular approaches to understanding the structure and function of streptococcal M protein: A unique virulence molecule. *In*: Bacterial-Host Cell Interactions. UCLA Symposium on Molecular and Cellular Biology. M. Horowitz, editor. Vol 64. Alan R. Liss, New York. pp 99-110.

20. **Manjula, B.N., V.A. Fischetti, T. Fairwell, A.S. Acharya**. 1987. Reversible dihydroxypropylation of amino groups in proteins: Application in primary structural studies if streptococcal M protein. *In*, Proteins: Structure and Function. J.J. L'Italien, editor. Plenum Press, New York. pp 169-176.

21. **Fischetti, V.A., K.F. Jones, S. Hollingshead, and J.R. Scott.** 1988. Molecular and antigenic architecture of the antiphagocytic group A streptococcal M protein. in Molecular Basis of Viral and Microbial Pathogenesis. W. Goebel, editor. Springer-Verlag, Heidelberg. pp 231-237.

22. **Bessen, D.B. and V.A. Fischetti**. 1988. Role of nonopsonic antibody in protection against streptococcal infection. *In*: UCLA Symposium on Vaccine Development. L. Lasky, editor. Alan R. Liss, New York. pp 493-502.

23. **Bessen, D.B. and V.A. Fischetti.** 1990. Vaccines against *Streptococcus pyogenes* infections.
In: New Generation Vaccines. G. Woodrow and M.M. Levine editors. Marcel Dekker inc. New York. pp 599-609.

24. **Scott, J.R., S.K. Hollingshead, and V.A. Fischetti.** 1990. The evolution of M proteins of group A streptococci. *In*: Bacteria, Complement and the Phagocytic Cell, F. Cabello and C. Pruzzo, editors. Springer-Verlag. pp 245-253.

25. **Fischetti, V.A., K.F. Jones, B.N. Manjula, R.D. Horstmann, S.K. Hollingshead, and J.R. Scott.** 1988. Streptococcal M protein: A unique antiphagocytic molecule. *In*: Pasteur Centenary Symposium. Molecular Biology and Infectious Diseases. M. Schwartz, editor. Elsiver, Paris. pp173-179.

26. **Fischetti, V.A., K.F. Jones, S.K. Hollingshead, and J.R. Scott**. Structure, function and genetics of streptococcal M protein. In: Reviews of Infectious Diseases. Vol 10, Supplement 2. Pages S253-259

27. **Fischetti, V.A. and D. Bessen.** 1988. Effect of mucosal antibodies to M protein on colonization by group A streptococci. *In*:Molecular Mechanisms of Microbial Adhesion. M. L. Switalski, M. Höök and

E.H. Beachey, editors. Springer-Verlag, New York. pp 128-142.

28. **Fischetti, V.A. F. Chapman, R. Kakani, J. James, E. Grun, and J.B. Zabriskie.** 1989. Role of Air in growth and production of toxic shock syndrome toxin 1 by Staphylococcus aureus in experimental cotton and rayon tampons. Reviews of Infect. Diseases. Vol II, Supplement 1, pp S176-181.

29. **Hall, W.W. S. Blander, R. Kakani, V.A. Fischetti, and J.B. Zabriskie.** 1989. Identification of a new toxin from a strein of *Staphylococcus aureus isolated from a patient* with nonmenstrual toxic shock syndrome. Reviews of Infect. Diseases. Vol II, Supplement 1, pp S130-136.

30. **Hollingshead, S.K., V.A. Fischetti, and K.F. Jones.** 1991. Isolation of spontaneous antigenic variants that exhibit antigenic drift in M6.1 protein in group A streptococci. *In*: Genetics and Molecular Biology of Streptococci, Lactococci, and Enterococci, Dunney and P.P. Cleary, editors. ASM publications. P. 174-178.

31. **Schneewind, O. V. Pancholi, and V.A. Fischetti.** 1991. The role of an LPSTGE sequence motif on membrane anchoring of streptococcal M protein. *In*: Genetics and Molecular Biology of Streptococci, Lactococci, and Enterococci. G.M. Dunny, P.P. Cleary and L.L. McKay editors. ASM publications. pp 290-294.

32. **Fischetti, V.A. V. Pancholi, and O. Schneewind**. 1991. Common characteristics of the surface proteins from gram-positive cocci. *In*: Genetics and Molecular Biology of Streptococci, Lactococci, and Enterococci, G.M. Dunny, P.P. Cleary and L.L. McKay editors. ASM publications. pp 290-294.

33. **Hollingshead, S.K., K.F. Jones, V.A. Fischetti**. 1991. Isolation of spontaneous antigenic variants of group A streptococci that exhibit antigenic drift in the M6.1 protein. *In*: Genetics and Molecular Biology of Streptococci, Lactococci, and Enterococci, G.M. Dunny, P.P. Cleary, and L.L. McKay editors. ASM publications. pp. 174-178.

34. **Fischetti, V.A., V. Pancholi, and O. Schneewind**. 1991. Surface proteins from Gram-positive cocci share unique structural features. In: Streptococci and Streptococcal Diseases XI. G. Orefici, editor. 165-167.

35. **Robbins, J.C. and V.A. Fischetti**. 1991. The evolution of the *emm6* gene of *Streptococcus pyogenes*. In: Streptococci and Streptococcal Diseases XI. G. Orefici, editor. pp. 183-185.

36. **Jones, K.F., O. Schneewind, J.M. Koomey, V.A. Fischetti.** 1991. DNA hybridization analysis of group A streptococcal T protein genes. *In*: Streptococci and Streptococcal Diseases XI. G. Orefici, editor. 177-179.

37. **Fischetti, V.A., D.E. Bessen, O. Schneewind, and D.E. Hruby.** 1991. Protection against streptococcal mucosal colonization. *In*: Microbial Adhesion and Invasion. M. Hook and L. Switalski editors. pp 137.

38. **Bessen, D.E. and V.A. Fischetti.** 1991. Characterization of two evolutionary divergent classes of group A streptococci and their relationship to pathogenicity: M protein structure and IgG-Fc and IgA-Fc receptors. *In*: Streptococci and Streptococcal Diseases XI. G. Orefici, editor. pp 212-213.

39. **Fischetti, V.A., D. Bessen, O. Schneewind, and D. Hruby**. 1991. Protection against streptococcal pharyngeal colonization with vaccines composed of M protein conserved regions. *In*: Advanc. Exp. Med.

Biol. Immunobiology of Proteins and Peptides VI. M.Z. Atassi editor. Plenum Publishing Corp., New York. P. 159-167.

40. **Fischetti, V.A., Pancholi, V. and O. Schneewind.** 1992. Surface Proteins from gram-positive cocci share unique features. *In*: Streptococci and Streptococcal Diseases XI. G. Orefici, editor. pp 165-167.

41. **Schneewind, O., Pancholi, V. and V.A. Fischetti.** 1992. The role of the "LPSTGE" motif and C-terminal hydrophobic domain of streptococcal M6 protein of membrane anchoring. *In*: Streptococci and Streptococcal Diseases XI. G. Orefici, editor. pp 174-176.

42. **Jones, K.F., Schneedwind, O., Koomey, J.M. and V.A. Fischetti**. 1992. DNA hybridization analysis of group A streptococcal T protein genes. *In*: Streptococci and Streptococcal Diseases XI. G. Orefici, editor. pp 177-179.

43. **Robbins, J.C. and V.A. Fischetti.** 1992. A "leucine zipper' motif within the amino termini of group A streptococcal M protein. *In*: Streptococci and Streptococcal Diseases XI. G. Orefici, editor. pp 183-185.

44. **Bessen, D.E. and V.A. Fischetti.** 1992. M protein-based vaccines against mucosal colonization by group A streptococci of a heterologous serotype. *In*: Streptococci and Streptococcal Diseases XI. G. Orefici, editor. pp 200-202.

45. **Robbins, J.C. and V.A. Fischetti.** 1992. The evolution of the *emm*6 gene of streptococcus pyogenes. *In*: Streptococci and Streptococcal Diseases XI. G. Orefici, editor. pp 208-209.

46. **Schneewind, O., Jones, K.F., and V.A. Fischetti**. 1992. Structure of group A streptococcal T6 protein. *In*: Streptococci and Streptococcal Diseases XI. G. Orefici, editor. pp 214-215.

47. **Khanna, A.K., Fischetti, V.A. and J.B. Zabriskie.** 1992. Heart reactive antibodies in the sera of acute rheumatic fever patients bind to human cardiac tropomyosin. *In*: Streptococci and Streptococcal Diseases XI. G. Orefici, editor. pp 285-286.

48. **Oggioni, M.R., Manganelli, R. Plevani, P., Fischetti, V.A. and G. Pozzi.** 1992. Expression of M6 protein of streptococcus pyogenes on the surface of *Streptococcus gordonii* challis. *In*: Streptococci and Streptococcal Diseases XI. G. Orefici, editor. pp 350-352.

49. **Fischetti, V.A., V. Pancholi, P. Sellers, J. Schmidt, G. Landau, X. Xu, and O. Schneewind.** 1992. Streptococcal M protein: a common structural motif used by gram-positive bacteria for biologically active surface molecules. *In*: FEMS: Molecular Recognition in Host-Parasite Interactions. T.K. Korhonen, T. Hovi, and P.H. Makela, editors. Plenum Publishing Corp., New York. Pages 31-38.

50. **Fischetti, V.A.** 1994. Purification of streptococcal M protein. *In*, Methods in Enzymology: Bacterial Pathogenesis, Part A, Chapter 21: Identification and regulation of virulence factors. Virginia L. Clark and Patrick M. Bavoil, eds. Academic Press, Orlando Florida. **235:286-294**.

51. **Rakonjack, J.V., J.C. Robbins, and V.A. Fischetti**. 1994. Cloning and some features of the serum opacity factor from *Streptococcus pyogenes*. *In*, Pathogenic Streptococci: Present and Future. A. Totolian Editor. Lancer Publications, St. Petersburg, Russia. Pages 93-95.

52. **Fischetti, V.A.** 1994. Nomenclature of M and M-like proteins. *In*, Pathogenic Streptococci: Present and Future. A. Totolian Editor. Lancer Publications, St. Petersburg, Russia. p 109.

53. **Medaglini, D. G. Pozzi, T.P. King, and V.A. Fischetti**. 1994. Expression of an allergin from white-faced hornet venom on the surface of *Streptococcus gordonii* for mucosal vaccine delivery. *In*, Pathogenic Streptococci: Present and Future. A. Totolian Editor. Lancer Publications, St. Petersburg, Russia. Pages 166-168.

54. **Vashishtha, V. and V.A. Fischetti**. 1994. Role of hydeophobic residues of streptococcal M protein in the cross-reactivity between a C-region peptide and denatured forms of myosin. *In*. Pathogenic Streptococci: Present and Future. A. Totolian Editor. Lancer Publications, St. Petersburg, Russia. Pages 460-461.

55. **Robbins, J.C., Rakonjac, J.A. and V.A. Fischetti.** 1995. Variation of the serum opacity factor locus (*sof*) of *Streptococcus pyogenes*. Dev Biol Stand. 1995; 85: 175-177.

56. **Fischetti, V.A., D. Medaglini, M. Oggioni, G. Pozzi.** 1995. Expression of foreign proteins on the surface of gram-positive bacteria for mucosal vaccine delivery. The Year of Louis Pasteur Symposia. Vaccines, One Hundred Years After Louis Pasteur. Institut Pasteur Publications. p 115-117.

57. **Fischetti, V.A.** 1996. Gram-positive commensal bacteria deliver antigens to elicit mucosal and systemic immunity. ASM News. **62**:405-410.

58. **Fischetti, V.A.** 1996. Use of gram-positive commensal bacteria as live mucosal vaccine vectors. IBC Biomedical Library Series. Nancy Mulford Editor. International Business Communications. p 1.3.1 - 1.3.27.

59. **Fischetti, V.A., D. Medaglini, and G. Pozzi.** 1996. Gram-Positive Commensal Bacteria for Mucosal Vaccine Delivery. *In*: Current Opinion in Biotechnology (Pharmaceutical Biotechnology). D. Liu and G. Jay eds. Vol. 7. pp 659-666.

60. **Bessen, D.E. and V.A. Fischetti.** 1997. Vaccines against *Streptococcus pyogenes* infections. *In*: New Generation Vaccines, second edition. M. Levine, G. Woodrow, J. Kaper, G. Cobon eds. Marcel Dekker, Inc. New York. pp 783-302.

61. **Fischetti, V.A.** 1997. Purification of streptococcal M protein. *In*, Bacterial Pathogenesis, the Work, Virginia L. Clark and Patrick M. Bavoil, eds. Academic Press, Orlando Florida. pp 169-177.

62. **Fischetti, V.A.** 1997. The streptococcus and the host: Present and future challenges. ASM News, **63**:541-545.

63. **Fluckiger, U. and V.A. Fischetti.** 1997. Immunoglobulins inhibit adherence and internalization Streptococcus pyogenes to human pharyngeal cells. **Adv.Exp.Med.Biol.418**:909-911.

64. **Dale JB, Cleary PP, Fischetti VA, Kasper DL, Musser JM, Zabriskie JB.** 1997. Group A and group B Streptococcal vaccine development. A round table presentation. **Adv. Exp. Med. Biol. 418**:863-868

65. **Rocha CL, Fischetti VA.** 1997. Identification and characterization of a new protein from Streptococcus pyogenes having homology with fibronectin and fibrinogen binding proteins. **Adv. Exp. Med. Biol. 418:** 737-739.

66. **Pancholi V, Fischetti VA.** 1997. A novel plasminogen/plasmin binding protein on the surface of group A streptococci. **Adv. Exp. Med. Biol. 418:**597-599

67. **Piard JC, Jimenez-Diaz R, Fischetti VA, Ehrlich SD, Gruss**. 1997. A The M6 protein of Streptococcus pyogenes and its potential as a tool to anchor biologically active molecules at the surface of lactic acid bacteria. **Adv. Exp. Med. Biol. 418:**545-550

68.**Yoshinaga M, Miyata K, Fischetti VA.** 1997. Human secretory immune response to streptococcal M protein. Identification of a secretory IgA epitope in the exposed conserved region. **Adv. Exp. Med. Biol. 418:**913-915.

69. **Motin, V., K.F. Jones, L.M. de la Mazza, V.A. Fischetti, and E.M. Peterson.** 1998. Display of the Variable domain 4 (VD4) of *Chlamydia trachomonas* MOPS on the surface of *Streptococcus gordonii.* in. Chlamydial Infections, R.S. Stephens, G.I. Byrnes et al editors, pp 547-550.

70. **Fischetti, V.A., A. Vashista, V. Pancholi.** 1999. Streptococcal M protein: Structure, Function and Immunology. *In*: Rheumatic Fever. J. Narula, R. Virmani, K.S. Reddy and R. Tandon, Eds. American Registry of Pathology, Washington, DC. pp 113-134.

71. **Fischetti, V.A.** Vaccine Development for Group A Streptococcal Infections. 1999. *In*: Rheumatic Fever. J. Narula, R. Virmani, K.S. Reddy and R. Tandon, Eds. American Registry of Pathology, Washington, DC. pp 473-484.

72. **Fischetti, V.A.** 2000. Protection against group A streptococcal infection. *In:* Streptococcal Infections, D.L. Stevens and E.L. Kaplan Eds. Oxford University Press. Chapter 19, pp 371-389.

73. **Fischetti, V.A.** 2000. Surface proteins on gram-positive bacteria. *In.* The Gram Positive Pathogens. V.A. Fischetti, R.P. Novick, J.J. Ferretti, D.A. Portnoy and J.I. Rood eds., ASM Publications, Washington, Chapter 2. pp 11-24.

74. **Fischetti, V.A.** 2000. Vaccine approaches to protect against group A streptococcal pharyngitis. *In.* The Gram Positive Pathogens. V.A. Fischetti, R.P. Novick, J.J. Ferretti, D.A. Portnoy and J.I. Rood eds., ASM Publications, Washington, Chapter 10. pp 96-104.

75. **Fischetti, V.A.** 2003. Novel Method to Control Pathogenic Bacteria on Human Mucous Membranes. **Ann N Y Acad Sci 987**:207-214.

76. **Fischetti, V.A.** 2005. Surface proteins on gram-positive bacteria. *In.* The Gram Positive Pathogens (Second edition). V.A. Fischetti, R.P. Novick, J.J. Ferretti, D.A. Portnoy and J.I. Rood eds., ASM Publications, Washington, Chapter 2. pp 12-25.

77. **Fischetti, V.A.** 2005. Vaccine approaches to protect against group A streptococcal pharyngitis. *In.* The Gram Positive Pathogens (Second edition). V.A. Fischetti, R.P. Novick, J.J. Ferretti, D.A. Portnoy and J.I. Rood eds., ASM Publications, Washington, Chapter 10. pp 113-122.

78. **Fischetti, V.A. and P. Ryan**. 2008. The Streptococcus. *In*: Practical Handbook of Microbiology. L. Green and E. Goldman editors. CRC Press, NY. P. 295-307.

89. **Visvanathan, K., C.M. MacIsaac., W.W. Hall, and VA Fischetti**. 2008. Immunological aspects of infection. In Essential Clinical Immunology. J.B. Zabriskie (editor). Cambridge University Press. P. 45-

59.

78. **Nelson, D., R. Schuch and V.A. Fischetti.** 2009. A Genetic Screen to Identify Bacteriophage Lysins. In: Bacteriophages: Methods in Molecular Biology, Vol 502:. Martha R.J. Clokie Andrew M. Kropinski (eds). Humana Press.

81. **Fischetti, V.A.** 2009. The Role of Bacteriophage in Group A Streptococcal Pathogenesis. *In*: Virulence Mechanisms of Bacterial Pathogens. K.A. Brogden et al eds. ASM Publications, Washington, DC. (In press)

BOOKS

1. **Gram Positive Pathogens**. 2000. V.A. Fischetti, R.P. Novick, J.J. Ferretti, D.A. Portnoy and J.I. Rood eds., ASM Publications, Washington, DC.

2. **Gram Positive Pathogens (Second edition)**. 2005. V.A. Fischetti, R.P. Novick, J.J. Ferretti, D.A. Portnoy and J.I. Rood eds., ASM Publications, Washington, DC. In preparation.